

**Paper reference 31760H**

**Pearson BTEC**

**Level 3**

**Nationals Extended Certificate,**

**Foundation Diploma,**

**Diploma, Extended Diploma**

**Total Marks**

**INFORMATION TECHNOLOGY**

**Unit 1: INFORMATION TECHNOLOGY  
SYSTEMS**

**Time: 2 hours plus your additional  
time allowance**

**In the boxes below, write your name, centre  
number and learner registration number.**

<b>Surname</b>						
<b>Other names</b>						
<b>Centre Number</b>						

<b>Learner Registration Number</b>						

**Y62515A**



**Pearson**

**YOU MUST HAVE**  
**Nil.**

**YOU WILL BE GIVEN**

- **A separate Data Book.**

**You do not need any other materials.**

## **INSTRUCTIONS**

- **Answer ALL questions.**
- **Answer the questions in the spaces provided in this Question Paper or in the Data Book – there may be more space than you need.**

## **INFORMATION**

- **The total mark for this paper is 90.**
- **The marks for EACH question are shown in brackets – use this as a guide as to how much time to spend on each question.**

**(continued on the next page)**

**Turn over**

## **ADVICE**

- **Read each question carefully before you start to answer it.**
  - **Try to answer every question.**
  - **Check your answers if you have time at the end.**
- 

**Question 1 is on the next page**

**ANSWER ALL QUESTIONS.  
WRITE YOUR ANSWERS IN THE  
SPACES PROVIDED.**

**1. Hazel is a freelance photographer.**

**She is home based and travels to  
photo shoots with clients.**

**(a) Hazel wants to buy a new laptop.**

**Look at the table for  
Question 1 (a) in the separate  
Data Book.**

**The table shows part of the  
specification of two laptops that  
Hazel is considering buying.**

**(continued on the next page)**

**Question 1 (a) continued**

- (i) Hazel wants to share photographs with clients.

Laptop B has a DVD/CD drive.  
This would enable Hazel to store photographs on a DVD/CD.

Identify TWO OTHER storage devices that Hazel could use with Laptop B.

(2 marks)

**STORAGE DEVICE 1** \_\_\_\_\_

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**Turn over**

**Question 1 (a) (i) continued**

**STORAGE DEVICE 2** \_\_\_\_\_

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**Question 1 (a) continued**

- (ii) Explain TWO drawbacks of using DVD's to share photographs with clients.  
(4 marks)**

**DRAWBACK 1** \_\_\_\_\_

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**Answer space continues on the next page**

**Turn over**

**Question 1 (a) (ii) continued**

**DRAWBACK 2** \_\_\_\_\_

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**(continued on the next page)**



**Question 1 continued**

**(b) Hazel has set up a wireless local area network (LAN) at home, which she shares with members of her family.**

- (i) Explain TWO benefits to Hazel and her family of using a LAN.  
(4 marks)**

**BENEFIT 1** \_\_\_\_\_

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**Turn over**

**Question 1 (b) (i) continued**

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**BENEFIT 2** \_\_\_\_\_

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**Turn over**

**Question 1 (b) continued**

- (ii) Other members of the family sometimes use Hazel's laptop. Hazel must keep client data stored on her laptop secure.

**Explain TWO methods Hazel could use to prevent family members accessing client data on her laptop.**

**(4 marks)**

**METHOD 1** \_\_\_\_\_

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**Question 1 (b) (ii) continued**

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**METHOD 2** \_\_\_\_\_

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**Turn over**

**Question 1 continued**

- (c) Hazel will buy her new laptop from a reputable supplier who provides after sales IT support.**

**The IT support is provided using remote desktop technology.**

**Explain TWO reasons why Hazel may be reluctant to allow an IT support technician to access her laptop remotely.**

**(4 marks)**

**REASON 1** \_\_\_\_\_

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**Turn over**

**Question 1 (c) continued**

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**REASON 2**

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**Turn over**

**Question 1 (c) continued**

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**Question 1 continued**

- (d) Laptop A has 1 TB HDD and  
Laptop B has a 256 GB SSD.**

**Discuss the characteristics of  
the TWO internal storage devices.  
(6 marks)**

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**Turn over**



### Question 1 (d) continued

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**Question 1 (d) continued**

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**(Total for Question 1 = 24 marks)**

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**2. HJAC is an accountancy firm with a head office and several regional offices.**

**(a) Staff at the regional offices communicate with head office via video calls over the internet.**

**The quality of the video calls depends on the bandwidth and latency of the broadband connection.**

**(i) Describe the terms  
‘bandwidth’ and ‘latency’.  
(4 marks)**

**Bandwidth**

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**Turn over**

**Question 2 (a) (i) continued**

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**Latency**

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**Question 2 (a) (i) continued**

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**Question 2 (a) continued**

- (ii) **Explain TWO factors that can affect bandwidth and latency.**  
**(4 marks)**

**FACTOR 1** \_\_\_\_\_

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**Turn over**

**Question 2 (a) (ii) continued**

**FACTOR 2** \_\_\_\_\_

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**Question 2 (a) continued**

**(iii) It is important to keep sensitive data secure during transmission between head office and regional offices.**

**HTTPS is one method of securing data during transmission.**

**Explain TWO ways HTTPS keeps data secure during transmission.**

**(4 marks)**

**WAY 1** \_\_\_\_\_

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**Question 2 (a) (iii) continued**

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**WAY 2**

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**Turn over**

**Question 2 (a) (iii) continued**

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**Question 2 continued**

- (b) HJAC has a Code of Practice, outlining the moral and ethical responsibilities of staff in all areas of business.**

**The Code of Practice includes guidance on the acceptable use of IT.**

**Discuss the guidance that should be given to staff on the acceptable use of IT.  
(6 marks)**

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**Answer pages continues on the next 3 pages**

**Turn over**

### Question 2 (b) continued

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**Turn over**

### Question 2 (b) continued

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**Turn over**

**Question 2 (b) continued**

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**(Total for Question 2 = 18 marks)**

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**3. Flower Chain supplies plants to stores in the north of England.**

**Plants are transported to the stores in vans. The vans are temperature controlled. The temperature is monitored to provide ideal conditions for the plants.**

- The temperature in the vans must be kept between 22°C and 28°C.**
- If the temperature is below 22°C a heater is turned on.**
- If the temperature is 28°C or above a fan is turned on.**

**(a) On the blank space provided for Question 3 (a) in the separate Data Book, draw a flow chart to show the process for maintaining the temperature in the van.  
(6 marks)**

**(continued on the next page)**

**Question 3 continued**

**(b) Each van is equipped with a navigation system.**

**(i) Describe how a navigation system works out the location of a van.  
(4 marks)**

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### Question 3 (b) (i) continued

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**Turn over**

**Question 3 (b) continued**

- (ii) The navigation system gives the driver the location of each store, based on an address or postcode.**

**Describe OTHER features of a navigation system that will help the driver make deliveries efficiently.  
(4 marks)**

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### Question 3 (b) (ii) continued

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**Turn over**

**Question 3 continued**

- (c) The navigation system has a graphical user interface (GUI).**

**Discuss the features of a GUI that make it the most appropriate type of interface for a navigation system.**

**(6 marks)**

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**Turn over**

### Question 3 (c) continued

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**Turn over**

### Question 3 (c) continued

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**Turn over**

**Question 3 continued**

- (d) Flower Chain wants to sell plants directly to the public via its website.**

**In order to enhance customer satisfaction, the website should be available 24/7.**

**Discuss OTHER factors that would enhance customer satisfaction when using the website.  
(6 marks)**

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### Question 3 (d) continued

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### Question 3 (d) continued

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**Question 3 (d) continued**

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**(Total for Question 3 = 26 marks)**

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**4. Individuals and organisations around the world make extensive use of information technology (IT) systems.**

**(a) There is a growing awareness of environmental issues relating to the use of IT.**

**Discuss how environmental concerns impact on the use of IT by individuals and organisations.**

**You should consider:**

- **hardware**
- **energy consumption**
- **recycling**
- **working practices.**

**(10 marks)**

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**Turn over**

### Question 4 (a) continued

[illegible]

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### Question 4 (a) continued

[illegible]

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### Question 4 (a) continued

[illegible]

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### Question 4 (a) continued

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**Turn over**

**Question 4 continued**

- (b) Legislation relating to the use of IT systems impacts on individuals and organisations.**

**Assess the role of current legislation in protecting users and their data from attack and misuse.**

**You should consider:**

- **computer misuse**
- **copyright**
- **protection of data.**

**(12 marks)**

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### Question 4 (b) continued

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### Question 4 (b) continued

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### Question 4 (b) continued

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**Question 4 (b) continued**

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**(Total for Question 4 = 22 marks)**

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**TOTAL FOR PAPER = 90 marks**

**END OF PAPER**

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